

Appendix 5.1. Clinical Psychologist Manual for Conducting RCT: Comprehensive Care for TMD

Session #1 [Week 1]

ACTION	TIME	
ORIENTATION / OVERVIEW OF PROGRAM	10 minutes	<p>Orientation to study protocol, integrated behavioral / dental treatment</p> <ul style="list-style-type: none"> • Psychologist introduces self. Psychologist tells patient about background, experience with working with individuals with pain conditions, and willingness to work with patient and dentist toward treatment goals. • Explain tape recording (for purposes of consistency in research) and start recorder. • Program is integrated with dental care. Psychologist, dentist, and patient will be working together. Overall goal is to enhance dental treatment by teaching patients methods they can easily learn and apply and that are simple, safe, and effective. The general goals for the program are: <ul style="list-style-type: none"> ⇒ Pain reduction and improvement of jaw function over time. ⇒ Reversing the negative impact of pain on mood and ability to participate in and enjoy daily activities. • Review with patient confidentiality of treatment, that we will communicate with their DDS and consult with other study psychologists, and limits of confidentiality (child/elder abuse, suicidality, and otherwise as required by state law). • Introduction to study procedures. Involvement in the research study involves receiving usual care with the dentist and six one-hour visits with the psychologist over the next several months. The first two sessions are this week and next, then every other week for 3 sessions, and then a month between the last 2 sessions (refer patient to “Program Overview” handout in manual). Major data collection follow-ups will take place at the end of the study, and then 6 and 12 months later.
REVIEW GRADED CHRONIC PAIN, ADDITIONAL HISTORY AND BACKGROUND (using database)	30 minutes	<p>Review graded chronic pain, pain history, additional history: Interactive, using database.</p> <ul style="list-style-type: none"> • Review components of graded chronic pain: <ul style="list-style-type: none"> ⇒ Pain intensity (present, average, worst) ⇒ Disability days ⇒ Pain interference (work, social, recreational activities) • Review history and explanatory model for pain and limitations: <ul style="list-style-type: none"> ⇒ Nature of symptoms - pain and jaw limitations (chewing, eating hard / soft foods, smiling, yawning, etc.) ⇒ Duration of condition ⇒ Pattern over time, daily pattern ⇒ Relationship of symptoms to behavior, parafunction, stress, other events ⇒ What makes condition / symptoms better and worse

ACTION	TIME	
<p>REVIEW BIOPSYCHO- SOCIAL TREATMENT APPROACH</p>	<p>10 minutes</p>	<ul style="list-style-type: none"> ⇒ To what does patient attribute cause and exacerbation of symptoms? ⇒ TMD treatment history • General personal history <ul style="list-style-type: none"> ⇒ Current living situation ⇒ Current work situation ⇒ Current social network, social support ⇒ Current and chronic stressors ⇒ Personal strengths and competencies ⇒ Current/past affective disorder (suicide screen, if indicated) ⇒ Current/past anxiety disorder • Medical treatment history <ul style="list-style-type: none"> ⇒ Treatment for other conditions, current medications ⇒ Prior significant illnesses, hospitalizations ⇒ Other pain conditions • Review treatment goals <ul style="list-style-type: none"> ⇒ Ask patient about his/her goals for treatment, and discuss how this integrated treatment will be oriented toward helping patient move toward those goals. ⇒ Ask patient about their attitude / feelings regarding seeing a psychologist for 6 sessions; probe to identify concerns / negative thoughts and address these. ⇒ Emphasize collaborative nature of treatment, and that these sessions are oriented toward behavior change associated with improving coping with pain and decreasing the negative impact of pain on the patient's life. ⇒ Emphasize to patient that the "treatment" is primarily what the patient learns to do that helps to prevent and manage TMD pain, and that work between sessions is essential for reaching treatment goals. <p>Review Biopsychosocial Treatment Approach</p> <ul style="list-style-type: none"> • TMD is a complex condition, often with multiple causes (even in one individual), with pain as a common outcome. <ul style="list-style-type: none"> ⇒ TMD can be a complex problem because of the complexity of this region – interplay of muscles, teeth, jaw joint, proximity of joint to ear, etc. [Refer to COLOR DIAGRAM.] It can be difficult to determine a single source of the pain, and many factors can contribute to pain and limitations in jaw use. [Show CAUSES CHART.] ⇒ The dentist will be handling the biological aspects of this complex condition, while these sessions focus on its behavioral/psychosocial aspects. ⇒ A view held by most professionals in the field is that jaw muscle tension and fatigue that come from clenching or grinding the teeth or otherwise maintaining an oral posture that abuses or stresses the muscles, and related negative feelings,

ACTION	TIME	
		<p>such as anxiety, worry, or depression, which may increase jaw muscle fatigue and tension are important in TMD. Jaw muscle overuse and tension and stress can become involved in a “vicious cycle” [CYCLE CHART].</p> <ul style="list-style-type: none"> • Biobehavioral treatment focuses on making changes in behavior that influence biological factors in a positive way. <p>This integrated treatment, involving both your sessions here and your treatment with the dentist, focuses on what you can do to reduce jaw muscle fatigue and tension, and we emphasize these components:</p> <ul style="list-style-type: none"> ⇒ Self-evaluation to determine factors influencing pain and jaw dysfunction and to decide when and what self-management is needed ⇒ Exercises and relaxation techniques to decrease jaw muscle problems and stress responses ⇒ Behavior change related to jaw habits and diet ⇒ Developing strategies for better coping with the negative moods and decreased activity that often accompany pain and may also contribute to muscle tension and increased pain ⇒ For some people, learning skills for identifying and dealing with other physical conditions which may relate to TMD
<p>EXPLAIN USE OF PERSONAL TMD HEALTH CARE PLAN</p>	<p>5 minutes</p>	<p>Developing a Personal TMD Health Care Plan</p> <ul style="list-style-type: none"> • Starting today and throughout the treatment, you will be developing a personally-relevant, tailored plan for management of this condition, which we call a Personal TMD Health Care Plan. <ul style="list-style-type: none"> ⇒ This plan will include some ongoing activities and some new exercises or reading to be done for that week. We will be building toward a final plan by the fifth session. ⇒ At the beginning of each session, we will review your progress with the plan and deal with any problems or obstacles. ⇒ At the end of each session, we will discuss what the plan involves for the next week (or two). During the third session, we will review the plan together with the dentist to get his/her input. • Show patient the Personal TMD Health Care Plan Form, instructions for completing, and sample.
<p>RATIONALE FOR JAW EXERCISES</p>	<p>10 minutes</p>	<p>Provide rationale for jaw exercises and additional pain management strategies.</p>

ACTION	TIME	
<p>DISCUSS PERSONAL TMD HEALTH CARE PLAN</p>	<p>10 minutes</p>	<ul style="list-style-type: none"> • The first set of health care activities to be included on their Personal Plan is exercises to monitor jaw posture and relax jaw muscles. • Elicit from patient if their dentist discussed jaw posture and muscle relaxation with them and ask if dentist provided them with the "Instructions for the Relief of Jaw Muscle Pain" checklist. If so, briefly review how patient has been doing with recommended jaw posture and jaw stretching exercises. Ask them to bring this back with them next time if they have it and did not bring it. • For all patients, remind them that a core component of their treatment is to decrease jaw clenching and grinding or other habits that fatigue and/or stress muscles, and to rehabilitate muscles with gentle opening exercises. <ul style="list-style-type: none"> ⇒ Turn to "Guidelines for Jaw Exercises" in Session 1 patient manual materials and review with patient (modify as appropriate based on dentist instructions to patient). • Indicate to patient that modifying diet, use of heat/cold, and use of medication provide additional pain management. <ul style="list-style-type: none"> ⇒ Review "Additional Pain Management" in Session 1 patient manual, modified as appropriate based on dentist instructions. <p>Complete Personal Plan with patient, including any anticipated obstacles and possible solutions. Incorporate dentist recommendations on Plan as appropriate. Take carbon copy.</p> <ul style="list-style-type: none"> • Provide patient with the remaining Session #1 materials. • Provide patient with Reference Section, including "Instructions for Relief of Jaw Muscle Pain" and "Instructions for Use of Occlusal Splints." • Review Health Care Activities in Patient's Manual. <ul style="list-style-type: none"> -- TO DO BEFORE SESSION 2 -- BRING BACK NEXT TIME <p>[Remind patient that it is important to read the TMD chapter and to complete the Reading Feedback Form, indicating any questions they have at the bottom, and to return the next time.]</p>
<p>SCHEDULING</p>	<p>2 minutes</p>	<ul style="list-style-type: none"> • Schedule Session #2 (next week) and Session #3 (in 3 weeks; coordinated with DDS). • Complete subject log.

Session #2 [Week 2]

ACTION	TIME	[START RECORDER]
REVIEW PERSONAL HEALTH CARE PLAN	5 minutes	<p>Review patient status; progress with plan</p> <ul style="list-style-type: none"> • Current status of patient • Personal Plan
REVIEW READINGS (Using Feedback Form)	5 minutes	<ul style="list-style-type: none"> • TMD manual (no Feedback Form) • <i>Understanding Temporomandibular Disorders (TMD)</i> • Questions for DDS or psychologist
MAINTENANCE ENHANCEMENT	5 minutes	<p>Maintenance Enhancement Strategies</p> <ul style="list-style-type: none"> • Review with patient (and record) any obstacles encountered in implementation of Personal Health Care Plan. • Brainstorm possible solutions for the coming week.
PROVIDE RATIONALE FOR RELAXATION STRATEGIES	10 minutes	<p>Provide rationale for use of relaxation for pain management</p> <ul style="list-style-type: none"> • Explain fight/flight response: <ul style="list-style-type: none"> ⇒ Our bodies respond to a variety of stressful events in a fairly specific way. For example, when we are scared, anxious, worried, or under a lot of mental strain or stress, we may feel nervous and shaky, notice that our heart is pounding and beating too fast, that we are breathing rapidly, that our muscles feel tight and fatigued, and that we may be perspiring. These changes in the body are often referred to as the "fight or flight" or "stress" response. Is it any secret that we use expressions such as "trembling with fear," "a knot in my stomach," "a racing heart," or "cold feet"? • Explain effect of chronic stress: <ul style="list-style-type: none"> ⇒ When these feelings of fear, anxiety, worry or mental strain subside, our nervous and shaky feelings and associated heart pounding, rapid breathing, muscle tightness and perspiration will also eventually subside. A little bit of stress in one's life is good and often helps one to "feel alive." However, excessive levels of stress typically leave one feeling tense, irritable, jittery and fatigued. There is now evidence to suggest that excessive levels of stress can harm the body resulting in heart disease, high blood pressure, gastrointestinal problems, headache and other chronic pain problems, and even cancer. • Explain relaxation response: <ul style="list-style-type: none"> ⇒ The good news is that our bodies also respond in a fairly specific way when we are deeply relaxed. During a state of profound relaxation there is slowing of the breathing and heart

ACTION	TIME	
		<p>rate, lowered blood pressure, muscle relaxation and a general feeling of calm. These changes in the body are referred to as the "relaxation response."</p> <p>The relaxation response can be brought on through the daily practice of meditation, yoga, biofeedback, abdominal breathing, progressive muscle relaxation, and other relaxation exercises.</p> <ul style="list-style-type: none"> • The relaxation response can also help to reduce pain. Relaxation exercises provide practice in learning to redirect attention from painful bodily sensations to other physical sensations. • Relaxation exercises can also reduce pain indirectly by reducing anxiety, worry and other negative emotions, and by improving sleep. • Jaw relaxation, jaw stretching, and general relaxation all help to interrupt the cycle of jaw muscle tension / fatigue, stress, and pain. [CYCLE CHART.] • Explain abdominal breathing: Abdominal breathing is deep breathing in which the stomach (or abdomen) expands as you inhale. Abdominal breathing brings more oxygen into the system, lowers heart rate and blood pressure, and reduces muscle tension throughout the body. • Explain that abdominal breathing will be used as a quick tension release technique to use throughout the day, and that it is used to lead into the generalized relaxation approach that the patient will be learning.
<p>PRACTICE QUICK RELEASE TECHNIQUE</p>	<p>5 minutes</p>	<p>Relaxation exercise: Practice tension-release (abdominal) breathing</p> <ul style="list-style-type: none"> • Demonstrate: Have patient place hand on abdomen as you do the same. Demonstrate abdominal breathing for several breaths, and have patient do so at the same time.
<p>PRACTICE PROGRESSIVE MUSCLE RELAXATION</p>	<p>20 minutes</p>	<p>Relaxation exercise: Progressive muscle relaxation exercise</p> <ul style="list-style-type: none"> • Go through the Progressive Muscle Relaxation script with patient. • Debrief response, effectiveness; trouble-shoot problems as needed.
<p>INTRODUCE LISTENING TO THE BODY TASKS</p>	<p>5 minutes</p>	<p>Provide brief rationale for Listening to the Body Tasks</p> <ul style="list-style-type: none"> • The purpose of the exercise I will do with you today, and another you will do by yourself at home using a tape, is to become a better interpreter of physical sensations and symptoms. The goal is an increased ability to tell the difference between physical sensations that do not require medical evaluation and physical sensations that

ACTION	TIME	
LISTENING TO THE BODY TASKS	10 minutes	<p>may be symptoms of a change in the body that requires medical evaluation.</p> <ul style="list-style-type: none"> This exercise will help you gain important understanding about the relationships between moods and bodily sensations. When you assume certain body postures, you may be reinforcing negative emotions and make the situation even worse than it is already. We will build on this understanding next time when we begin using the thought records. <p>Listening to the Body: Awareness exercises</p> <ul style="list-style-type: none"> Raise your eyebrows and pull up your lip corners to show your teeth, and hold posture for 30 seconds. What kind of thoughts pass through your mind? Relax. Now, bring your eyebrows together and clench your jaw and fists. What are you thinking now? <p>Discuss: The first posture is usually associated with happiness and the second face with anger and rage. How did you feel? Scientists have demonstrated that assuming such facial expressions is associated with the mood-specific physiological changes of sadness, anger and happiness. When we get more of our body involved in these postures, the emotional connection is greater.</p> <p>Let's try another exercise that demonstrates how body posture relates to mood and feelings.</p> <ul style="list-style-type: none"> Bend your head down, round your shoulders, cross your arms in front of you and cross your legs. Close your eyes for one minute. What do you feel emotionally? Do not use the word "pain" and stick to the emotional feelings, not physical description. Relax. Stand up and place your feet apart, approximately the width of your hips. Keep your shoulders back with your head looking straight in front and arms down with the palms facing forward. Close your eyes. What do you <u>feel</u> now? <p>Discuss: The first position is associated with a wide range of feelings, such as: safety, security, sadness, vulnerability, or fear.</p>

ACTION	TIME	
DISCUSS PERSONAL HEALTH CARE PLAN	5 minutes	<p>The second position is usually associated with feelings of: control, positive attitude, power or maybe vulnerability.</p> <p>Clearly, just like your pain perception, the wide range in responses to body posture reflects complex mind/body language that you have automatically learned over the years.</p> <p>ONGOING:</p> <ul style="list-style-type: none"> • TMD jaw exercises <p>NEW:</p> <ul style="list-style-type: none"> • Provide patient with Session #2 materials and "Listening to Your Body: How" for Reference Section. • Provide patient with relaxation audiotape and review instructions for use ("Guidelines for Physical Relaxation" in patient manual). • Provide patient with Listening to the Body tape and indicate that the patient manual provides further explanation of the reason for using this tape ("Listening to Your Body: Why"). • Complete Personal Plan with patient (including anticipated obstacles/solutions). • Review Health Care Activities in Patient's Manual: <ul style="list-style-type: none"> -- TO DO BEFORE SESSION 3 -- PHONE CALL -- BRING BACK NEXT TIME • OPTIONAL [Somatizing patients]: Have patient complete medical use/medication form at home and bring back next time.
SCHEDULING	2 minutes	<ul style="list-style-type: none"> • Schedule phone call #1 (1 week) and write on Personal Plan. Take carbon copy of Personal Plan. • Confirm Session #3 appointment with DDS (2 weeks). • Complete subject log.
PHONE CALL #1	WEEK 3 (15 minutes)	<p>Phone call to patient</p> <ul style="list-style-type: none"> • Patient status • Review use of Personal Plan in past week and for the next week. • Discuss any questions about or obstacles to doing jaw exercises or relaxation exercises and problem solve with patient. • Discuss "Listening to the Body" exercise. • Confirm next appointment.

Session #3 [Week 4]

ACTION	TIME	[START RECORDER]
REVIEW PERSONAL HEALTH CARE PLAN	10 minutes	<p>Review patient status; Progress with plan</p> <ul style="list-style-type: none"> • Current status of patient • Personal Plan • Medical use/medications form (optional)
REVIEW READING (using feedback form)	5 minutes	<ul style="list-style-type: none"> • <i>Working With Your Doctor</i> • <i>Communication: Getting the Most from Your Doctor-Patient Relationship</i> • Questions for DDS or psychologist (DDS questions to be discussed when he/she present)
MAINTENANCE ENHANCEMENT	5 minutes	<p>Maintenance Enhancement Strategies</p> <p>Review with patient any obstacles that they identified to implementation of TMD exercises or use of relaxation.</p> <p>Brainstorm possible solutions and have them record on plan.</p>
RELAXATION	5 minutes	<p>RELAXATION EXERCISE: Practice abdominal breathing.</p> <p>Spend 3 minutes practicing tension release breathing technique, guiding patient through use of abdominal breathing and suggest use of relaxing word or phrase such as “relax” to accompany each exhalation. Debrief use of technique in promoting relaxation in the session and in use outside of the session.</p>
REVIEW HEALTH CARE PLAN WITH DDS	25 minutes	<p>REVIEW HEALTH CARE PLAN WITH DDS: Dentist and patient discuss; psychologist facilitates discussion.</p> <p>Review of dental and behavioral diagnostic decisions and treatment approaches</p> <ul style="list-style-type: none"> • Review of TMD status and other treatment seeking <ul style="list-style-type: none"> ⇒ DDS elicits patient status, progress, other health care ⇒ DDS responds, using patient-provided information as cues: <ul style="list-style-type: none"> ◆ Emphasize need for dentist to monitor physical safety of patient and to assess for disease progression ◆ DDS responsibility to examine / follow-up / give feedback • Discuss realistic expectancies <ul style="list-style-type: none"> ⇒ DDS gives model of TMD as largely representing physical changes that are reversible / manageable, although safe (easy) cures may not be available ⇒ Reinforce patient role in chronic pain management vs. cure ⇒ Clarify DDS long-term role in TMD management <ul style="list-style-type: none"> ◆ The dentist is the long-term provider who monitors for long-term change; instruct and support for long-term self management, as needed. ⇒ Review biobehavioral treatment component <ul style="list-style-type: none"> ◆ DDS as collaborator / supporter

ACTION	TIME	
<p>INTRODUCE COGNITIVE COPING TECHNIQUES, THOUGHT RECORD</p>	<p>15 minutes</p>	<ul style="list-style-type: none"> ◆ The psychologist as temporary facilitator for learning how best to develop long-term coping strategies, clarify the complicated relationships between pain and other symptoms and how those symptoms get to be detected and interpreted. • Discuss and reach consensus on patient status and treatment: <ul style="list-style-type: none"> ⇒ Elicit and discuss patient's and DDS' explanatory model for present condition, diagnostic testing and treatment plan, and longer term course of condition, as well as respective roles of DDS and psychologist. ⇒ OPTIONAL: Based on review of medical/medications form, identify important health care providers psychologist will contact regarding excessive or multiple medication use or to clarify nature of and treatment for chronic illnesses or other pain conditions. Obtain consent to release information. • State next steps in treatment program: <ul style="list-style-type: none"> ⇒ Continue to see DDS as advised ⇒ Go into greater depth about health care management and working with your doctor (as appropriate for patient) ⇒ Become better able to gauge how body is working, through self-monitoring of TMD and other symptoms ⇒ Learn coping methods instead of passive "just have to live with it." <p>Introduce cognitive coping techniques and use of automatic thought record.</p> <ul style="list-style-type: none"> • Pain affects a person not only physically, but can result in a low mood or lack of energy or enthusiasm for activities, and can influence how you view yourself and your life. • The ways in which pain, feelings, thoughts, and activities relate are different for everyone. An important part of this treatment is clarifying those connections and providing you with skills to manage pain and low moods or negative thoughts that may accompany pain. • To begin learning these important skills, we want you to begin keeping a log of painful situations or situations associated with negative mood, using this record. <ul style="list-style-type: none"> ⇒ Show A-B-C record in patient manual ("TMD Pain Thought Record") and explain each column <ul style="list-style-type: none"> A = Activating event or stressor (e.g., TMD pain that interferes with fulfilling a work responsibility) B = Beliefs or thoughts associated with the event (e.g., "now I can't do the work; I'm going to get fired"; "My whole body feels tense--I must be getting sick or there must be something physically wrong with me.") C = Consequences (feelings; e.g., guilty, frustrated,

ACTION	TIME	
DISCUSS PERSONAL HEALTH CARE PLAN	5 minutes	<p>discouraged); heightened pain or other physical sensations</p> <p>⇒ Review written example from patient manual ("TMD Pain Thought Record" sample) with patient.</p> <p>⇒ Reassure patient that reading will provide further background and explanation, as will the next session.</p> <p>ONGOING:</p> <ul style="list-style-type: none"> • TMD jaw exercises (as modified by DDS interaction) • Use of relaxation tape and quick release breathing <p>NEW:</p> <ul style="list-style-type: none"> • Provide patient with Session #3 materials and explain • Complete Personal Plan with patient (including anticipated obstacles/solutions). • Review Health Care Activities in Patient's Manual: <ul style="list-style-type: none"> --TO DO BEFORE SESSION 4 --PHONE CALL --BRING BACK NEXT TIME
SCHEDULING	2 minutes	<ul style="list-style-type: none"> • Schedule phone call #2 (1 week) and write on Personal Plan. Take carbon copy of Personal Plan. • Schedule Session #4 (2 weeks) • Complete subject log
PHONE CALL #2	WEEK 5 (15 minutes)	<p>Phone call to patient</p> <ul style="list-style-type: none"> • Patient status. • Inquire about any questions or difficulties with implementation of Personal Plan and discuss use for the next week, with revisions as needed. • Have patient read one entry from the thought record and assist as needed to help patient distinguish between thoughts and feelings and to identify relationships between thoughts, feelings and physical sensations. Focus in on making sure that the patient is becoming familiar with the technique and using the columns correctly. • Encourage patient with continued attention to plan, and confirm date and time of next appointment.

Session #4 [Week 6]

ACTION	TIME	[START RECORDER]
REVIEW PERSONAL HEALTH CARE PLAN	10 minutes	<p>Review patient status; Progress with plan</p> <ul style="list-style-type: none"> • Current status of patient • Personal Plan • Use of automatic thought records
REVIEW READINGS (Using Feedback Form)	5 minutes	<ul style="list-style-type: none"> • <i>Pain and Basic Stress Management</i> • <i>Psychological Techniques for Managing Chronic Pain</i> • Questions for dentist or psychologist
MAINTENANCE ENHANCEMENT	5 minutes	<p>Maintenance Enhancement Strategies</p>
		<ul style="list-style-type: none"> • Review with patient (and record) any obstacles encountered in implementation of Personal Health Care Plan. • Discuss use of previously generated solutions. Generate new solutions as needed.
RELAXATION	5 minutes	<p>Relaxation exercise: Use of tension release breathing</p>
		<ul style="list-style-type: none"> • Inquire about patient's use of tension release breathing, orienting patient toward use of exercise as general relaxation, anxiety reduction, or opportunity to detect physical sensations/moods (as appropriate for depressed/anxious/somatizing patients). • Indicate to patient that this week's materials include a list of alternative types of relaxation tapes for them to try if they would like. Also included is a list of relaxing music tapes.
EXPLAIN RATIONALE FOR COGNITIVE COPING TECHNIQUES	10 Minutes	<p>Provide expanded rationale for cognitive coping techniques</p> <p>Discuss role of thoughts and beliefs in pain and negative emotions, providing examples of how thinking, mood, pain, and other physical sensations are interrelated.</p> <ul style="list-style-type: none"> • First, of course, living with pain can be very difficult – most people feel discouraged, sad or overwhelmed by pain, and angry about how it limits their activities and pleasure in life. • The amount and unpleasantness of pain and physical sensations vary depending on the context and the person's thoughts about the meaning of pain. • Pain that is accompanied by fear, anxiety and/or uncertainty about what it means and/or how long it will last (e.g., fearing that the pain is a sign of serious disease or that the pain will get progressively worse) is likely to be felt as stronger and/or more unpleasant than pain that is understood to be not life threatening and predictable. • An injury that occurs during an exciting or pleasant activity may not be as readily noticed or as bothersome as the same injury taking place in a setting that is unpleasant or less distracting. • At times when a person is feeling sad, tired, or overwhelmed, pain may seem more intense and overwhelming than when that person is feeling positive and well rested. Negative emotions are negative

ACTION	TIME	
DISCUSS USE OF THOUGHT RECORD	10 Minutes	<p>physical states.</p> <p>Review the A-B-C-D Model for confronting negative thinking about pain, providing patient with a written example and explaining the fourth column (D).</p> <ul style="list-style-type: none"> ⇒ D = Disputing negative thoughts, beliefs, or physical states through challenging validity of thoughts, generating alternative thoughts and/or behaviors that will decrease the intensity of negative thoughts or feelings. ⇒ Explain that the approach involves more than simply thinking “positive” or pleasant thoughts, and that the goal is not necessarily to eliminate pain or its impact but to reduce the intensity of its negative impact. ⇒ Review written example from patient manual (“TMD Pain Thought Record: Sample”—4 column) with the patient. ⇒ Review one of patient’s A-B-C examples from the prior week, generating alternatives for “D” column and rating belief in each alternative.
INCREASING ACTIVITY, MASTERY / PLEASURE	10 minutes	<p>INCREASING ACTIVITY: Develop an exercise / activity plan.</p> <ul style="list-style-type: none"> • Provide rationale for increasing physical activity as a pain management technique: <ul style="list-style-type: none"> ⇒ physical activity is distracting and reduces physical tension; ⇒ physical activity can help reduce negative moods caused by pain; ⇒ activity has been shown to produce pain-reducing neurotransmitters (endorphins) in the brain; ⇒ activity improves general health. ⇒ physical activity redirects energy into pleasurable physical states, diminishing focus on negative physical states. ⇒ enjoyable! • Assess patient’s current level of activity and preferred types of activities, coming to an agreement on which type of daily activity the patient is going to initiate (or increase). Goal should be to work up to a specified amount of time engaging in the activity (e.g., 20-40 minutes) 3-4 times/week. For patients who are sedentary, and/or who do not have ideas about a preferred activity, a walking program is recommended, although gardening or similar types of activities are also appropriate. • Ask patient to establish with their physician that they are physically able to undertake an exercise program. • Go over with patient “Worksheet for Increasing Activities -- Example” in Session 4 reading (“Chronic Pain and Increasing Activity”), and then help patient complete their own “Worksheet for Increasing Activities” (if time; if not, have patient complete at home between sessions). • Emphasize to patient the importance of planning activities in

ACTION	TIME	
DISCUSS PERSONAL HEALTH CARE PLAN	5 minutes	<p>advance.</p> <ul style="list-style-type: none"> • Work with the patient to incorporate proposed physical activity on Personal Plan. • For patients who are already physically active, emphasize importance of continuing with their activity, and have them incorporate a mastery or pleasure activity to do 3-4 times/week. <p>DEPRESSED PATIENTS: Discuss concepts of mastery and pleasure and potential impact of activity on mood. With these patients, it is important to establish that the exercise activity selected is likely to enhance the patient's sense of mastery and/or pleasure. Have these patients rate their mood before and after doing their scheduled activity on Personal Plan.</p> <p>SOMATIZING PATIENTS: Review preoccupation with symptoms, health care. Present this aspect of treatment as an opportunity to redirect thoughts and energy toward positive physical activities.</p> <ul style="list-style-type: none"> ⇒ Increasing fitness can help reduce opportunities for negative messages from the body (such as being out of breath; pounding heart) or becoming injured. ⇒ Readings regarding pleasurable activities will further discuss refocusing on healthy activities and allowing the body to be a source of pleasure/enjoyment as a way to distract from and diminish pain and other negative bodily states. <p>ONGOING:</p> <ul style="list-style-type: none"> • TMD jaw exercises • Use of relaxation tape and quick release breathing • Use of thought records to record painful/stressful situations <p>NEW:</p> <ul style="list-style-type: none"> • Provide patient with Session #4 materials and explain. Provide them with "Relaxation Tapes" and "Music for the Heart and Mind" lists for Reference section of their manual. • Complete Personal Plan with patient (including anticipated obstacles/solutions). • Review Health Care Activities in Patient's Manual: <ul style="list-style-type: none"> -- TO DO BEFORE SESSION 5 -- PHONE CALL -- BRING BACK NEXT TIME • <u>OPTIONAL</u>: Additional readings for depression, anxiety, somatization, sleep disturbance as needed.
SCHEDULING	2 minutes	<ul style="list-style-type: none"> • Schedule phone call #3 (1 week) and write on Personal Plan. Take carbon copy of Personal Plan. • Schedule Session #5 (2 weeks) • Complete subject log
PHONE CALL #3	WEEK 7 (15 minutes)	Phone call to patient

ACTION	TIME	
		<ul style="list-style-type: none">• Patient status.• Inquire about any questions or difficulties with Personal Plan and address as needed. Discuss use of Plan for the next week.• Have patient provide one example of how he/she challenged a negative thought or assumption related to pain or depressed/anxious mood.• Discuss with patient current status of exercise / activity program, and problem solve any difficulties.• Encourage patient and confirm time and date of next appointment.

Session #5 [Week 8]

ACTION	TIME	[START RECORDER]
REVIEW PERSONAL HEALTH CARE PLAN	10 minutes	<p>Review patient status; progress with plan</p> <ul style="list-style-type: none"> • Current status of patient • Personal Plan • Use of automatic thought records • Exercise graph (optional) • Alternative relaxation tapes (optional)
REVIEW READINGS (Using Feedback Form)	5 minutes	<ul style="list-style-type: none"> • <i>The Pleasure Principle</i> • “... and the Pursuit of Happiness” • <i>Chronic Pain and Increasing Activity</i> • Optional Readings (as assigned) • Questions for dentist and psychologist
RELAXATION	5 minutes	<p>Relaxation exercises: Application.</p> <p>Inquire about use of tension release breathing and progressive muscle relaxation (with and without use of audiotape). Discuss patient’s ability to use relaxation strategies on their own and to apply techniques in “real-life” situations.</p>
REVIEW AUTOMATIC THOUGHT RECORDS	20 minutes	<p>Review automatic thought records</p> <ul style="list-style-type: none"> • Patient and therapist go over automatic thoughts records, as in phone call before session. Therapist continues to work with patient to identify automatic negative thoughts and feelings associated with TMD problems, to distinguish between thoughts and feelings, and to uncover associations between thoughts, feelings, and bodily sensations. • Therapist makes sure events, thoughts, feelings, and alternate thoughts are in the correct columns. Therapist probes to make sure all relevant thoughts and feelings are listed, so that all feelings (and physical sensations) can be connected to corresponding thoughts. • DEPRESSED/ANXIOUS PTS.: Therapist works with patient to challenge thoughts, e.g., by questioning the evidence for the thought, by generating a gray alternative for black-and-white thinking, by considering other possible explanations, or by considering that even if the thought is true, the consequences may not be as negative as the patient anticipates. • SOMATIZING PATIENTS: Therapist points to examples, both from use of thought records and Listening to the Body Task, of: <ul style="list-style-type: none"> ⇒ <i>triggers</i>: acute situational encounters and unpleasant physical response (e.g., stepping off curb too near a passing car, going to dentist, biting down too hard) which yield both pain and distress about condition.

ACTION	TIME	
<p style="text-align: center;">FINAL PERSONAL HEALTH CARE PLAN</p>	<p style="text-align: center;">15 minutes</p>	<p>⇒ <i>sustained negative emotions</i>: discuss with patient how long-standing inner states, such as conflict, frustration, disappointment, make the body feel, e.g., worried to death, sick with worry; the negative physical states let us know we are worried over health, frustrated with a boss, significant other, or ourselves for not being able to get started or to do better. The body may be providing us with cues to address these situations or to redirect our focus to use of coping techniques (e.g., relaxation, cognitive coping strategies).</p> <p>⇒ Review symptom amplification: worry or distress about symptoms leads to focus on symptoms and heightened awareness of them, which may increase both distress and symptoms.</p> <p>⇒ Review with the patient the applicability of model to other symptoms, physical conditions.</p> <p>Final Personal Health Care Plan developed by therapist and patient:</p> <ul style="list-style-type: none"> • Modification of current plan (TMD self-management): Therapist and patient expand / revise the Personal Health Care Plan for the coming week as a model for the patient’s long-term Personal Health Care Plan. Patients may revise the frequency with which certain activities are done, based on experiences of the past several weeks (what works / what is feasible). • Long-Term TMD / Health Care Plan: Therapist and patient discuss and incorporate into Health Care Plan: <ul style="list-style-type: none"> ⇒ planned program for professional TMD health care ⇒ <u>Depressed patients</u>: Prevention and management of low mood and other depressive symptoms. ⇒ <u>Somatizing patients</u>: Review plan for general use of health care services and approaches to symptom management. <p>[Review with patient issues that have been discussed regarding discriminating normal physical sensations and "aches/pains" that can be addressed with self-management from new symptoms requiring medical intervention.]</p> <p>[Discuss with patient a plan for management of TMD and other physical conditions including: regularly scheduled visits with primary care physician and/or oral medicine specialist; keeping primary care physician fully informed regarding use of OTC and prescription medications; consulting with primary providers regarding any referrals/consultations with specialists.]</p> • Incorporation of Maintenance Enhancement Strategies for Dealing with Flare-ups and “Relapses”: Use the “Relapse Prevention Plan” in the patient manual to guide the following discussion, completing the form as you proceed. <ul style="list-style-type: none"> ⇒ Generate with patient a list of <u>symptoms</u> that indicate the condition is recurring or worsening. For example, pain on

ACTION	TIME	
		<p>chewing and muscle tightness may be an early warning sign.</p> <ul style="list-style-type: none"> ⇒ Discuss <u>life situations</u> the patient has identified as exacerbating the condition (e.g., extremely busy work weeks, periods of conflict with spouse, stress related to holiday season). ⇒ Generate an action plan for management of symptoms when they recur and to anticipate dealing with particular life situations that increase symptoms or interfere with adherence. ⇒ Review with patient the obstacles they have encountered and types of solutions that have been most helpful in addressing these obstacles. Anticipate and discuss possible future obstacles and solutions.
<p>REVIEW PERSONAL HEALTH CARE PLAN</p>	<p>5 minutes</p>	<p>ONGOING:</p> <ul style="list-style-type: none"> • Implementation of Personal Health Care Plan <p>NEW:</p> <ul style="list-style-type: none"> • Provide patient with Session #5 materials and explain. Provide them with "UW TMD Program: References" to be included in Reference Section of manual. • Complete Personal Plan with patient (including anticipated obstacles/solutions). • Review Health Care Activities in Patient's Manual <p>-- TO DO BEFORE SESSION 6</p> <p>-- PHONE CALL</p> <p>-- BRING BACK NEXT TIME</p>
<p>SCHEDULING</p>	<p>2 minutes</p>	<ul style="list-style-type: none"> • Schedule phone call #4 (2 weeks) and write on Personal Plan. Take carbon copy of Personal Plan. • Schedule Session #6 (1 month) • Complete subject log
<p>PHONE CALL #4</p>	<p>WEEK 10 (15 minutes)</p>	<p>Phone call to patient</p> <ul style="list-style-type: none"> • Patient status. • Answer questions as needed regarding use of Personal Plan for past two weeks and next two weeks. • Ask patient to review completed "Relapse Prevention Plan" with you. Discuss with patient, providing assistance as needed in generating appropriate coping strategies. • Encourage patient and confirm date and time of next session.

Session #6 [Week 12]

ACTION	TIME	[START RECORDER]
REVIEW PERSONAL HEALTH CARE PLAN	10 minutes	<p>Review patient status; progress with plan</p> <ul style="list-style-type: none"> • Current status of patient • Personal Plan/Relapse Prevention Plan
REVIEW READINGS (Using Feedback Form)	5 minutes	<ul style="list-style-type: none"> • <i>Relapse and Recovery</i> • Questions for DDS or psychologist
REVIEW TREATMENT COURSE	10 minutes	<p>Review patient's course and progress in treatment</p> <ul style="list-style-type: none"> • Review patient's initial TMD symptoms and progress over the course of the past few months. • Discuss continued difficulties and prognosis, emphasizing cyclic, recurrent, but non-progressive nature of the condition. • Review progress regarding depression, anxiety, and somatization, as appropriate. • Review current use of medication. • Review muscle tension/stress/pain cycle and patient's use of strategies to intervene in this cycle. • Review possible application of techniques to other chronic pain and/or somatic conditions.
DISCUSS / MODIFY PERSONAL TMD HEALTH CARE PLAN	5 minutes	<p>Modify Health Care Plan</p> <p>Discuss with patient any proposed modifications to Plan based on past month on implementation; incorporate modifications into Plan.</p>
MAINTENANCE ENHANCEMENT	5 minutes	<p>Maintenance Enhancement Strategies</p> <ul style="list-style-type: none"> • Review with patient definition of relapse: single mistake, an error or slip, for which there is the potential for "recovery" or return to the desired behaviors. So instead of relapse=failure, relapse=lapse. • Review with patient their Relapse Prevention and their Personal Plan regarding types of situations that have tended to interfere with effective implementation of Plan during treatment. Review with them strategies for dealing with adherence as included in their plan. • Discuss with patient appropriate use of dentist-TMD provider in assisting in dealing with relapses or recurrence of pain. • Review overall approach to treatment and self-management by going over Program Summary in patient manual (Session #6). • Provide patient with Session #6 materials, including blank forms to be placed in Reference section.
FUTURE	5 minutes	<p>Discussion regarding future biobehavioral treatment</p>

ACTION	TIME	
BIOBEHAVIORAL TREATMENT		<ul style="list-style-type: none"> • If referral of the patient for further psychological or psychiatric treatment is clinically indicated, discuss this with patient, providing rationale and names of providers. • If patient requests referral, facilitate as needed with names of providers • Indicate to patient that he or she may obtain future consultation or referral either by discussing with dentist or contacting psychologist during course of study. Psychologist will not be available to provide future treatment.
DEBRIEF THERAPEUTIC RELATIONSHIP	5 minutes	<p>Debrief therapeutic relationship</p> <ul style="list-style-type: none"> • Ask patient to provide feedback for therapist regarding strengths and weaknesses of program. • Therapist provides feedback to patient and encouragement for future progress and symptom improvement.
RESEARCH BUSINESS	5 minutes	<p>Research-related business</p> <ul style="list-style-type: none"> • Ask patient to provide feedback about participation in research study. • Thank patient for participation in the research study and provide information about follow-up data collection. Emphasize importance of participation in follow-up data collection, and emphasize that psychologist and dentist will not see their follow-up data. • Remind patient of postcard follow-up in 3 months, questionnaire in 6 months, postcard in 9 months, and questionnaire and examination in one year. • Make arrangements for subject payment and remind them that they will also be paid at 6-month and 1-year follow-up. • Obtain information as needed for subject tracking/address form. • Provide subject with post-treatment questionnaire and instructions for leaving in room • Complete subject log.

TMD COMPREHENSIVE TREATMENT PROGRAM

Optional Readings

Anxiety

- 1) “What are the Anxiety Disorders” from The Anxiety and Phobia Workbook
- 2) “Working Through Stress and Anxiety,” Bristol-Myers
- 3) “Understanding Anxiety” from Mind Over Mood

Depression

- 1) “Depression,” Chapter 1 from Control Your Depression
- 2) “Depression: What You Need to Know,” NIMH
- 3) “Understanding Depression” from Mind Over Mood

Sleep Disturbance

- 1) “Helpful Hints to Help You Sleep,” Searle
- 2) “Suggestions for a Good Night’s Sleep”
- 3) “Easy Steps to Help You Sleep,” Searle

Other (all from Managing Pain Before It Manages You)

- 1) “The Mind-Body Connection,” Chapter 3
- 2) “The Body-Mind Connection,” Chapter 4
- 3) “Adopting Healthy Attitudes,” Chapter 7
- 4) “Effective Communication,” Chapter 8
- 5) “Effective Problem Solving,” Chapter 9
- 6) “The End of the Beginning,” Chapter 10

R01 Study 2: Research Protocol

<u>Week</u>	<u>Visit</u>	<u>CBT Intervention: Clinical Psychologist</u>	<u>Visit</u>	<u>Usual Treatment: Dentist</u>
1	---		1	Initial clinical visit: RDC/TMD Axis 1/2 diagnoses; study recruitment; assignment to psychologist
2	1 60 min.	Orientation to study protocol and biobehavioral treatment program Review clinical database Introduce Personal Plan Begin self-management exercises		
3	2 60 min.	Review Personal Plan Begin relaxation exercises Introduce cognitive coping techniques		
4	3 90 min.	Review Personal Plan/Dental Treatment with DDS present Practice relaxation exercises Continue with cognitive coping techniques	2	Usual treatment
5		Phone call #1 to review progress		
6	4 60 min.	Review Personal Plan Develop exercise/activity plan		
7		Phone call #2 to review progress		
8	5 60 min.	Finalize Personal Plan for long-term management Relapse prevention	3	Usual treatment
9		Phone call #3 to review progress		
11		Phone call #4 to review progress		
12	6 60 min.	Review progress and treatment Maintenance enhancement strategies Post-intervention measures	4	Usual treatment Post-intervention measures